

### **REMARKS**

Applicant has reviewed and considered the Office Action mailed on October 6, 2003, and the references cited therewith.

Claims 1, 3, 4, 21, 34, 43, 44, 58, 72, 73, 79, and 80 are amended, no claims are canceled, and no claims are added; as a result, claims 1-86 are now pending in this application. The amendments to the claims are fully supported by the specification as originally filed. No new matter is introduced. The amendments are made to clarify the claims. Applicant respectfully requests reconsideration of the above-identified application in view of the amendments above and the remarks that follow.

Claims 1, 21, 43, 58, 72, 79 find support in the specification, for example, at page 7, line 24-page 8, line 3.

Claim 3 finds support in the specification, for example, on page 8, lines 11-15.

Claim 4 is amended to depend on claim 1.

Claims 34, 44, 73 find support in the specification, for example, on page 7, lines 12-16.

Claim 80 finds support in the specification, for example, at page 7, line 24-page 8, line 3.

### **Information Disclosure Statement**

Applicant submitted an Information Disclosure Statement and a 1449 Form on September 24, 2003. Applicant respectfully requests that initialed copies of the 1449 Forms be returned to Applicants' Representatives to indicate that the cited references have been considered by the Examiner.

### **First §102 Rejection of the Claims**

Claims 1-86 were rejected under 35 USC § 102(b) as being anticipated by Ventrudo et al. (U.S. Patent No. 5,841,797). Applicant traverses these grounds for rejection of these claims.

Applicant can not find in Ventrudo et al., U.S. Patent No. 5,841,797, (hereafter Ventrudo '97) a teaching or suggestion of a laser system having a laser and first and second wavelength-selective reflective elements, where the wavelength-selective reflective element closest to the front of the laser is at a distance from the front of the laser that is substantially less than the coherence length of the diode laser, as recited in claim 1, as amended.

On the contrary, Ventrudo '797 recites at column 9, lines 44-52:

As previously indicated, multiple longitudinal mode operation described above requires that the optical separation between the laser diodes and the fiber grating is preferably longer than that of the coherence length of the laser diodes. If the separation is less than the coherence length, the feedback will be coherent with the output of the laser diodes and very narrow, single longitudinal mode operation near the fiber grating wavelength will result; such a situation may again lead to intensity noise if mode transitions occur. (*underlining added*)

Further, Ventrudo '797 continues to follow this requirement in various forms of his apparatus that use one or more gratings (typically one grating for each laser source used) that are positioned from the output facets of the laser sources at a distance that exceeds the coherence length of the laser sources. *See, column 12, lines 48-52, column 13, lines 34-39, column 14, lines 31-34, and column 15, lines 9-13.* Therefore, Applicant submits that Ventrudo '797 teaches away from claim 1, and, therefore, does not teach or suggest all the elements as recited in claim 1. "Anticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (*emphasis added*). Thus, Applicant submits that Ventrudo '797 does not anticipate claim 1 and that claim 1 is patentable over Ventrudo '797.

Independent claims 21, 43, 58, 72, and 79 recite similar elements as claim 1 and are patentable over Ventrudo '797 for similar reasons as stated with respect to claim 1. Claims 2-20, claims 22-42, claims 44-57, claims 59-71, and claims 80-86 depend on claims 1, 21, 43, 58, 72, and 79, respectively, and are patentable over Ventrudo '797 for the reasons stated above and additionally in further view of the elements of these dependent claims.

Applicant respectfully requests withdrawal of these rejections of claims 1-86, and reconsideration and allowance of these claims.

#### Second §102 Rejection of the Claims

Claims 21-71 were rejected under 35 USC § 102(b) as being anticipated by Ventrudo et al. (U.S. Patent No. 5,485,481). Applicant traverses these grounds for rejection of these claims.

Applicant can not find in Ventrudo et al., U.S. Patent No. 5,485,481, (hereafter Ventrudo '481) a teaching or suggestion of a laser system having a laser and first and second wavelength-selective reflective elements optically coupled to the laser, where one of the wavelength-selective reflective elements is at a distance from the front of the laser that is substantially less than the coherence length of the laser, as recited in claim 21, as amended.

On the contrary, Ventrudo '481 recites at column 5, lines 11-22:

To ensure the maintenance of the coherence collapse of the laser emission, the fibre grating is located at a sufficient optical distance from the front facet of the diode laser. This distance must be much longer than the coherence length of the diode laser under the prescribed conditions of optical feedback, so that optical feedback from the fibre grating remains incoherent, thus assuring the laser remains in a state of coherence collapse. If the grating is placed within a few centimetres or less of the diode laser, then the feedback from the fibre grating may be coherent with the electric field inside the laser cavity, and very narrow linewidth operation of the diode laser will result. (*underlining added*)

Further, Ventrudo '481 deals with a laser and a single fibre Bragg grating. *See, Summary and Figure 2.* The Office Action has taken the output facet of Ventrudo's diode laser as a first wavelength-selective reflective element. Claim 21 recites two wavelength-selective reflective elements that are optically coupled to the recited laser and thus separate from the recited laser, which also means that the two wavelength-selective reflective elements are not output ends of the recited laser. Claim 21 is amended to further clarify the claim. Therefore, Applicant submits that in addition to Ventrudo '481 teaching away from claim 21, Ventrudo '481 does not teach or suggest all the elements as recited in claim 1. "Anticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). Thus, Applicant submits that Ventrudo '481 does not anticipate claim 21 and that claim 21 is patentable over Ventrudo '481.

Independent claims 43 and 58 recite similar elements as claim 21 and are patentable over Ventrudo '481 for similar reasons as stated with respect to claim 21. Claims 22-42, claims 44-57, and claims 59-71 depend on claims 21, 43, and 58, respectively, and are patentable over

Ventrudo '481 for the reasons stated above and additionally in further view of the elements of these dependent claims.

Applicant respectfully requests withdrawal of these rejections of claims 21-71, and reconsideration and allowance of these claims.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

Respectfully submitted,

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Date 6 JANUARY 2004

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6 day of January, 2004.

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Signature